

PATENT APPLICATION  
Atty. Docket No. PP019813.0003  
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## AMENDMENT TO THE CLAIMS

MAY 24 2007

This listing of claims will replace all prior versions, and listings, of claims in the application:

## CLAIMS

1. (Original) A mutant *Neisseria meningitidis* ADP-ribosylating enzyme, wherein the mutant has a substitution at one or more of amino acids Glu-109, Glu-111 or Glu-120.
2. (Original) The mutant enzyme of claim 1, wherein the mutant has reduced or eliminated ADP ribosyltransferase and/or NAD-glycohydrolase activity relative to the wild-type enzyme, wherein the wild-type enzyme has amino acid sequence SEQ ID NO: 1.
3. (Original) The mutant enzyme of claim 1 or claim 2, wherein the mutation(s) is/are preferably Glu to Asp.
4. (Currently Amended) The mutant enzyme of any preceding claim, wherein the enzyme comprises ~~one of the amino acid sequences SEQ ID NO: 2, SEQ ID NO: 3 or of~~ SEQ ID NO: 4.
5. (Original) A protein comprising a fragment of a *Neisseria meningitidis* ADP-ribosylating protein, wherein (i) the fragment includes one or more of amino acids Glu-109, Glu-111 or Glu-120 from said ADP-ribosylating protein, and (ii) one or more of said amino acids Glu-109, Glu-111 or Glu-120 is substituted.
6. (Currently Amended) The protein of claim ~~6~~ 1, wherein the Glu-109, Glu-111 or Glu-120 is substituted with Asp.
7. (Currently Amended) The protein of claim ~~6~~ 5 or claim ~~6~~ 7, wherein the fragment comprises at least 7 consecutive amino acids from the toxin or mutant toxin.
8. (Currently Amended) The protein of ~~any preceding claim~~ claim 1, for use as an immunogen.
9. (Currently Amended) The protein of ~~any preceding claim~~ claim 1 for use as a parenteral or mucosal vaccine adjuvant.
10. (Cancelled)
11. (Currently Amended) An immunogenic composition comprising the protein of ~~any one of claims 1 to 7~~ claim 1 in admixture with a second antigen.

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12. (Currently Amended) An antibody which binds to the protein of claim 1 ~~any one of claims 1 to 7~~, wherein the antibody binds to an epitope which includes one or more of amino acids Glu-109, Glu-111 or Glu-120.
13. (Currently Amended) Nucleic acid encoding the protein of claim 1 ~~any one of claims 1 to 7~~.
14. (Currently Amended) A method of treating a patient, comprising administering a therapeutically effective amount of the protein of ~~any one of claims~~ claim 1 to 7 and/or the nucleic acid of claim 13 and/or the antibody of claim 12.
15. (Original) A process for diminishing the ADP-ribosylating enzymatic activity of a *N.meningitidis* ADP ribosyltransferase protein, comprising mutating amino acid residue 109, 111 and/or 120 of said protein.